

- Title** Kangaroo Mother Care
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- Reference** Technology Review Report 017/2014, online:  
[http://www.moh.gov.my/index.php/database\\_stores/store\\_view\\_page/30/257](http://www.moh.gov.my/index.php/database_stores/store_view_page/30/257)

### Aim

To assess the effectiveness, safety, cost/ cost- effectiveness and organizational implication of KMC compared with conventional care for premature and low birth-weight infants in reducing the length of hospital stay.

### Conclusions and results

A total of 192 titles were identified through the Ovid interface and PubMed. Seven articles related to KMC were included in this review: two systematic reviews, two RCTs, one non-RCT, one cross sectional study and one cost analysis study.

#### a. Effectiveness

- A good level of evidence compared to conventional hospital care demonstrates that KMC:
  - reduced the length of hospital stay by 2.2 days
  - increased breastfeeding rate, duration and exclusivity up to six months post-birth
  - promoted better infant growth
  - was associated with reduced risk of mortality at discharge or 40 to 41 weeks' postmenstrual age and at latest follow up; however, at six months and beyond, the difference between KMC and conventional care groups was no longer significant
- Limited good level of evidence to show that KMC benefited in cardio-respiratory stability compared to conventional hospital care.
- The evidence suggesting that KMC promoted normal thermoregulation was inconclusive. Babies with birth weight of less than 1500g, who require stable thermoregulation and environmental humidification were not well represented in the available studies.
- Fair level of evidence to suggest that KMC improved maternal satisfaction and bonding/ attachment between mother and infant.

#### b. Cost/ Cost-effectiveness

A cost analysis conducted in Nicaragua found that the total average cost of care for a neonate before practising KMC was US \$ 2,322, while after practising KMC the cost was US \$ 1,808. The largest expenditure was on training of health professionals but this cost was offset by the amount saved with shorter hospitalisation, elimination of incubator use, and lower medication and infant formula costs.

#### c. Organizational implication

Education and training in KMC should be based on the same basic understanding of the concept and accompanied by the creation of awareness, committed champions, multidisciplinary teamwork and continuous support from the authority. One way of initiating a policy of early discharge from hospital is to establish a KMC ward. The presence of committed individuals who are knowledgeable about KMC as agents of change is considered as a prerequisite for successful implementation. Information about KMC should be included in the curricula of all health care professionals. The gradual introduction of KMC, supported by appropriate educational strategies, may lead to broader acceptance, less resistance and better results in the long term.

#### Recommendations (if any)

KMC is recommended for stable preterm and low birth weight babies in MOH facilities to promote breastfeeding, maternal-child bonding and developmental care. In babies with birth weight between 1500g to 2500g, duration of hospital stay is expected to be shorter. However, KMC cannot be seen as a replacement to incubators in the Malaysian context.

#### Methods

Electronic databases were searched through the Ovid interface: Ovid MEDLINE® In-process and other Non-indexed citations and Ovid MEDLINE® 1946 to present, EBM Reviews - Cochrane Central Register of Controlled Trials – August 2014, EBM Reviews - Cochrane Database of Systematic Reviews - 2005 to August 2014, EBM Reviews - Health Technology Assessment - 3<sup>rd</sup> Quarter 2014, EBM Reviews – NHS Economic Evaluation Database 3<sup>rd</sup> Quarter 2014, Embase – 1988 to 2014 week 36. Searches were also run in PubMed. Google was used to search for additional web-based materials and information. Additional articles were identified from reviewing the references of retrieved articles.

#### Further research/reviews required

Further well- designed economic evaluations are needed to assess the cost- effectiveness of KMC

#### Written by

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